



Annual Report

CONSERVING NATURAL RESOURCES FOR A BETTER ENVIRONMENT

98 ALEXANDRIA PIKE, SUITE 31 ► WARRENTON, VA 20186

JOHN MARSHALL SWCD 2006 ACCOMPLISHMENTS

Fiscal Year (FY) 2006 was busy at the John Marshall Soil and Water Conservation District (JMSWCD). In carrying out our mission to serve and educate the citizens of Fauquier County to ensure the proper stewardship of soil, water and other natural resources, some of the many accomplishments included:

Annual Awards Luncheon - Baer Back Farms in Orlean was once again in the spotlight during our Annual Awards Luncheon in January. This year they received honors from the Virginia Department of Conservation and Recreation as the winner of the Rappahannock River Basin Clean Water Farm Award. The District also recognized Difficulty Farm of the Plains with the Harry Jones Conservation Farmer Award for the Potomac Watershed. Also, in recognition of the conservation efforts of the Virginia Department of Forestry, the District presented them with the 2006 Conservation Partnership Award. Claire Mello, elementary science teacher at Highland School was recognized with the Edwin F. Gulick Education Award for her outstanding efforts in teaching conservation and environmental awareness.

Chesapeake Bay Cost-Share Program - During Fiscal 2006, twenty-two Fauquier County farmers and landowners received over \$364,000 in cost share for installing water quality protection practices on their farms, over two times the amount distributed in 2005! For more details see page 2.

Erosion and Sediment Control (E&S) - Continuing its role as the Plan Review and Inspection Agency for Fauquier County E&S, the JMSWCD conducted 8,540 inspections during FY 2006. This represents a 75% increase over 2005. A full breakdown by quarters is listed on page 5.

Educational Programs - Over 3,000 students participated in educational programs conducted by the District. These included programs on point and non-point source pollution, erosion and sediment control, watershed studies, soil studies, stream and pond monitoring, field days, and others.

Upper Rappahannock Watershed Stream Monitoring Program - JMSWCD staff and volunteers continued to monitor eight streams on a quarterly basis for macroinvertebrate populations. In addition, ten sites on Thumb Run were monitored for E. coli on a monthly basis and results shared with DEQ.

TMDL Program - The District started the implementation phase of the TMDL (Total Maximum Daily Load) program on Thumb, Carter, Great, and Deep Runs.



Claire Mello, science teacher at Highland School, Roberta Jeffries of Difficulty Farm, Peggy and Mack Baer of Baer Back Farms, and Jonathan Pine, Virginia Department of Forestry, were recognized at the annual JMSWCD Awards Luncheon held on January 18 at Vint Hill.

VIRGINIA AGRICULTURAL BMP PROGRAM

The Virginia Agricultural Best Management Practices (BMPs) Cost-Share Program has been administered by the District for over twenty years. This program provides financial incentives for farmers and landowners to install more than 45 different BMPs that improve water quality and conserve valuable soil resources.

Farmers and landowners that implement agricultural BMPs can qualify for a 75% reimbursement of allowable expenses, as well as a 25% credit on their Virginia State income taxes for their out-of-pocket allowable expenses. The tax credit can be as much as \$17,500 and spread out over a 5 year period. To be eligible for the program, the practice must be designed in consultation with

staff to meet NRCS specifications, included in a conservation plan and approved by the District Board prior to construction. Since 1985, the JMSWCD has paid Fauquier County farmers \$3,230,603.45 to install conservation practices on agricultural land. In FY 2006, \$364,356.45 was paid out for BMPs.

Cost-share applications are taken on a continuous basis and ranked according to established criteria. Priority considerations are given to those practices that display the most cost effective means to improve water quality.

Highlights of the Virginia AG BMPs Completed in 2006

PRACTICE	DESCRIPTION	INSTALLED	DOLLARS SPENT
Grazing Land Protection (SL-6)	Fences livestock from surface water, provides alternative water sources, hardened crossings, and cross fencing.	43,256 feet of stream protection fence installed, 844 acres of pasture treated.	\$298,930.98
Stream Protection (WP-2)	Fences livestock from surface waters, provides for hardened stream accesses.	1408 feet of stream protection fence installed, 27 acres of pasture treated.	\$4,628.03
Permanent Cover on Cropland (SL-1)	Coverts cropland to hay or pasture.	161 crop acres planted to grass.	\$29,815.44
Small Grain Cover Crop (SL-8B)	Small grain, winter cover crop on cropland.	863 acres planted in cover.	\$30782.00
Riparian Forest Buffer (FR-3)	Planting of hardwood trees along stream corridor.	1 acre	\$200
Summary		44,664 feet of stream protection fence, 1896 acres under conservation treatment.	\$364,356.45



As part of a grazing land protection practice (SL-6) this gravity fed water trough provides stable and safe access to clean, healthy water. Its location within a water corral provides access from multiple pastures.



Another riparian forest buffer in the making. Stream exclusion fencing protects surface water from contamination by manure and sediment. Hardwoods (planted in tree tubes) filter nutrients and will provide future shade.

USDA FEDERAL PROGRAMS

Conservation Reserve Enhancement Program (CREP)

The CREP program provides for voluntary agreements with farmers to convert cropland and marginal pastureland adjacent to streams to native grasses or trees, in return for rental payments and other incentives. Fauquier County rental rates are approximately \$75 per acre per year. Participants may also receive 80-100% of the cost of installing eligible conservation practices.

The John Marshall SWCD participated with the Farm Service Agency and the Natural Resources Conservation Service (NRCS) in implementing the Conservation Reserve Enhancement Program (CREP). Over 620 acres of riparian buffers have been planted since the program began in 2001. Hardwood tree survival rates range from 80% to 90%. Over 41 miles of streambank have been planted and protected from grazing.

CREP PROGRAMS COMPLETED THROUGH 2006

Watershed	# Tracts	Acres Planted	Miles Fenced	State Cost-Share	State Tax Credit	State Carry-over
Potomac	30	222.3	20.4	\$ 60,638.00	\$ 0.00	\$ 6,189.50
Rappahannock	27	400.5	21.3	\$132,950.00	\$ 0.00	\$ 0.00
Total	57	622.8	41.7	\$190,588.00	\$ 0.00	\$ 6,189.50

Conservation Reserve Program (CRP) - CRP encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as native grasses, wildlife plantings, trees, filter strips, or riparian buffers through an annual rental payment for the term of the multi-year contract.

Environmental Quality Incentives Program (EQIP) – Through EQIP, farmers and ranchers may receive financial and technical help to install or implement structural and management conservation practices on eligible agricultural land.

Wildlife Habitat Incentives Program (WHIP) - WHIP participants agree to implement a wildlife habitat development plan for fish and/or wildlife, and the USDA agrees to provide cost-share assistance for the initial implementation

of the plan. Program participants enter into a 5 to 10 year agreement with the USDA

Farmland Protection Program (FPP) – FPP is a voluntary program that provides matching funds to State, Tribal, or local governments and non-governmental organizations with existing farmland protection programs to purchase conservation easements or other interests in land.

Grassland Reserve Program (GRP) – GRP helps land-owners conserve grassland, rangeland, pastureland, shrubland and certain other lands and provides assistance for rehabilitating grasslands. GRP offers producers several enrollment options: permanent easements, 30-year easements, rental agreements (10, 15, 20, or 30-year duration) and restoration agreements.

TECHNICAL ASSISTANCE AND CONSERVATION PLANNING

Designing best management practices, working with farmers to assure proper implementation, and following through after installation to make sure expectations are met are integral parts of technical assistance. This is a service the District provides to all members of the agricultural community, regardless of any program participation, and is the heart of the “working relationship” that has made Conservation Districts a success.

As a member of the Conservation Partnership, which includes the USDA-Natural Resources Conservation Service, VA Department of Conservation and Recreation, VA Department of Forestry, VA Cooperative Extension, and VA Department of

Game and Inland Fisheries, the District provides technical assistance and information to help agricultural enterprises operate more efficiently and meet their land stewardship goals.

Proper land management will protect natural resources and sustain agricultural operations. Good management requires good planning. The process of conservation planning looks at each individual farm’s natural resource base and management objectives to provide a plan to meet stewardship goals. JMSWCD staff is willing and able to work in the development of a customized conservation plan to address each farms specific needs and objectives.

EROSION AND SEDIMENT CONTROL PROGRAM

The JMSWCD continues to be the plan review and inspection agency for Fauquier County's Erosion and Sediment Control Program. The number of construction projects including single family homes (SFH), subdivisions and commercial sites continues to increase as noted in the chart on the next page. The number of site inspections and erosion and sediment control plans reviewed increased dramatically this year.

The E&S staff is as follows: Debbie Switzer is the E&S Program Manager, Kerry Wharton and Sonny Lawrence are urban and commercial E&S Control Inspectors/plan reviewers, and Jacob Bauckman, E&S Control Specialist works with the Single Family Home program. This year Kerry Wharton and Sonny Lawrence obtained their E&S Program Administrator's Certification and Jacob Bauckman earned his Inspector's Certification from the Department of Conservation and Recreation. The District strives to obtain and maintain current certification and attend training as needed to keep up with new practices and technology.

Fauquier County experienced a very dry spring, followed by some torrential rains during the summer. Some of these storms were much more severe than the usual summer thunderstorms. All construction projects should be prepared to expect the unexpected thunderstorms with good erosion and sediment controls.

Most erosion controls are designed to handle a 10-year

storm. If a 50-year or 100-year storm hits, the controls will most likely be overwhelmed. When that happens, the contractor needs to clean up and maintain or re-install controls on the site. The storms were very localized with regard to the amounts of rainfall. It was not uncommon for one area to receive 2 inches of rain while just down the road they received 4 inches of rain. The governor even declared a state of emergency due to flooding and other weather conditions. The District received a few calls regarding E&S control failures on sites and inspected the sites as time allowed. The Virginia Erosion and Sediment Control Law requires E&S inspections on permitted construction sites within 48 hours of runoff producing rainfall.

The District continues to work with the county to ensure compliance with the Virginia Erosion and Sediment Control Law. The County, being the enforcement agency, can issue a Notice to Comply and Stop work order for subdivision and commercial sites. County building inspections can be discontinued if there are outstanding E&S violations at single family home sites.

JMSWCD continues to participate in the Technical Review Committee meetings with the County, the owner, and other review agencies to discuss plans, comments, and resolve outstanding issues. The JMSWCD continues to strive to work closely with all project representatives to achieve efficient and comprehensive environmental protection during construction.



Silt fences need to be entrenched and maintained to prevent runoff as pictured above.



This drop inlet silt fence is correctly installed and doing its job of containing silt laden runoff.

John Marshall Soil and Water Conservation District

Erosion and Sediment Control Record

	FY '05	FY '06	FY '06	FY '06	FY '06	FY '06
<u>Inspections</u>	Total	1 st Qtr (As of 9/30/05)	2 nd Qtr (As of 12/31/05)	3 rd Qtr (As of 3/31/06)	4 th Qtr (As of 6/30/06)	Total
State mandated <i>bi-monthly</i> inspections	975	299	316	298	329	1242
State mandated <i>monthly</i> inspections	414	124	95	101	114	434
Ordinance mandated <i>stabilization</i> inspections	45	29	22	29	25	105
<i>Single-family home</i> inspections (in active subdivisions)	2251	1698	1483	1028	1113	5322
<i>Single-family home</i> inspections (rural)	1222	467	235	349	386	1437
<i>Total Inspections</i>	<u>4892</u>	<u>2617</u>	<u>2151</u>	<u>1805</u>	<u>1967</u>	<u>8540</u>
<u>Program Administration</u>						
Formal <i>notices of violation</i>	32	9	7	4	14	34
<i>Stop work orders</i> (enforcement activity)	5	1	1	1	1	4
<i>Single-family home</i> stop work orders	134	64	19	18	18	119
Active projects (inspected bi-monthly/monthly)	148	117	108	107	122	170
Establishment projects (inspected quarterly)	53	53	61	58	51	84
<i>Single-family homes</i> (in active subdivisions)	494	389	322	246	284	615
<i>Single-family homes</i> (rural)	321	132	162	204	219	349
Ordinance mandated <i>initial</i> inspections	41	26	17	15	20	78
Ordinance mandated <i>final</i> inspections	15	6	9	17	7	39
E&S plans reviewed	124	50	41	50	50	191
Complaint response	70	16	1	11	13	41
Referrals reviewed (Preliminary plats, Rezoning, & Special Exceptions)	10	6	0	1	0	7

EDUCATIONAL PROGRAMS

The John Marshall SWCD conducted over 500 conservation education programs for 3,000 individuals in Fauquier County for FY 2006. District employees worked with elementary through high school age students, and adult audiences, providing information on a variety of conservation topics such as point and nonpoint source pollution, water quality, stream monitoring, soils, erosion and sediment control, and best management practices. Programs are customized to meet the needs of the groups requesting the programs. Participating students represented public, private, and home schooled youth. Adult participants included teachers, parents, chaperones, farmers and other interested citizens.

During FY 2006, the JMSWCD educational programs included:

Cedar Run Monitoring Project - Students from Erin Wyld's Fauquier High School Ecology class conducted water quality tests and collected macroinvertebrates on a monthly basis at Cedar Run as part of a long-term educational watershed study.

Marsh Run Monitoring Project - Students from Dave Crompton's Liberty High School AP Biology class conducted water quality tests and collected macroinvertebrates at Marsh Run on a monthly basis as part of a long-term educational watershed study.

Conservation Field Day - 150 seventh-grade students, teachers, and chaperones from Taylor Middle School participated in a conservation field day at Messick's Dairy Farm in October. Guest instructors presented talks on milking, newborn calves, nutrient management, water quality, macroinvertebrates, soils, forestry, insects, and composting.

Farm Tours - JMSWCD personnel coordinated and hosted over 800 third grade students, teachers, and chaperones at local farms in September. Students rotated through newspaper recycling, dairy milking, dairy calf, nutrient management, farm life cycle, plant, nutrition, farm animal, farm equipment, insect, soil, and water quality stations. Blue Ridge Farm, Elk Mount Farm, and Inglewood Farm served as hosts for the students.

Educational Displays - JMSWCD personnel set up and staffed educational displays at several events, including the Fauquier County Fair and the Plant Show and Sale.

Groundwater Education - Ten students from Deborah Stevens high school science class at Highland were taught how to use the Groundwater Flow Model. They in turn, demonstrated the model to elementary and middle school classes at Highland.

Point and Non-Point Source Pollution - The *Enviroscape* model was used to demonstrate the impact of everyday rural and urban events on watershed health to 250 students from elementary and middle schools.

Boy Scout Jamboree - District personnel used the *Enviroscape* model to assist with the Soil and Water Conservation merit badge station at the Boy Scout Jamboree held at Fort A.P. Hill in July.

Pond Study - Helen Lathrop's and Erin Wyld's Biology classes at Fauquier High School conducted water quality tests each month to track the chemical and biological health of the Fauquier Outdoor Lab's pond.

Soil Studies - Over 300 elementary youth received hands-on instruction in soil studies, learning about structure and texture, the soil profile, and soil testing. All students made soil tubes.

Leaf Pack Project - Claire Mello's fifth grade science classes at Highland School completed a macroinvertebrate study using the leaf pack method at Clifton Farm, in cooperation with Environmental Studies at Airlie.



Highland students sort through leaves looking for mayflies, stoneflies, and other macroinvertebrates as part of the Leaf Pack project conducted at Clifton Farm.

Upper Rappahannock Monitoring - JMSWCD staff and volunteers continued monitoring of 8 sites for macroinvertebrates using the Modified Virginia SOS method. Streams are monitored on a quarterly basis and data entered on the SOS website. Charts and graphs showing data collected since 2001 were printed in the quarterly newsletter and a special monitoring brochure.

E. coli Monitoring - Ten sites on Thumb Run were tested on a monthly basis for E. coli in cooperation with DEQ. Bacterial colonies were grown in the office using the Coliscan Easygel method, and results emailed to DEQ via quarterly spreadsheets.

Presentations - The District purchased equipment for Power Point and developed presentations on Macroinvertebrate Monitoring, E. coli Monitoring, Erosion and Sediment Control, and Best Management Practices. Presentations were made to school groups, citizen groups, local government, and the Warrenton Rotary Club. In addition, two presentations on Christmas Tree Production were made at the Woodlands/Wildlife Conferences sponsored the Virginia Association of Conservation Districts, Virginia Department of Forestry, and Virginia Cooperative Extension.

Warrenton Natural History Day Camp - JMSWCD staff assisted over 20 youth campers with macroinvertebrate monitoring and chemical testing in the Rappahannock River near Orlean.

Litter Pick-up - The staff of John Marshall SWCD took part in the annual Clean Waterways Virginia program and picked up over 600 pounds of litter on Rt. 802 where it crosses the Rappahannock River

Inter-Agency Cooperation

The JMSWCD works closely with several other government agencies to meet its educational goals. Staff from other agencies frequently assist the District in conducting educational programs and field days. JMSWCD staff in return, have extended their technical expertise to assist other agencies with their programs. In the last year, personnel from Virginia Cooperative Extension, Virginia Department of Forestry, Department of Conservation and Recreation, Fauquier Community Development, and numerous volunteers from local farms, the Fauquier Master Gardeners, Piedmont Environmental Council, and Joiner Micro Labs have assisted with District programs. District staff have made presentations on Best Management Practices, Cost Share Programs, IPM, Insects, and Stream Monitoring at Extension and Master Gardener programs.



Tom Turner, Conservation Specialist, discusses watersheds with Taylor Middle School students at Conservation Field Day held at Messick's Dairy Farm

The Annual Report is a yearly publication of the **JOHN MARSHALL SOIL AND WATER CONSERVATION DISTRICT**, 98 Alexandria Pike, Suite 31, Warrenton, Virginia, 20186-2849.

District Directors

Mary Lou Trimble, Chair
Bob Tudor, Vice Chairman
William "Billy" Frazier, Sec/Tres
Tim Mize
A. Gray Coyner

Associate Directors

John Bauserman
Nicolaas Kortlandt
Mack Baer

District Volunteer

John Schied

Website Address

www.fauquiercounty.gov/government/departments/jmswcd

NRCS Employees

Rex Rexrode, District Conservationist
Vera Kopach, NOWCC Adm. Asst.

JMSWCD Employees

Jennifer R. Krick, District Manager
Debbie Switzer, E&S Program Manager
Sonny Lawrence, E&S Specialist
Kerry Wharton, E&S Specialist
Jacob Bauckman, E&S Specialist
Tom Turner, Cons. Specialist
Larry Dunn, Cons. Specialist
Chuck Hoysa, Cons. Ed. Specialist
Nancy Miller, Office Associate

Honorary Directors

Henry Green
Edwin F. Gulick

Newsletter Editor

Chuck Hoysa

Phone

(540) 347-3120, ext. 3

Email:

johnmarshall.swcd@vaswcd.org

The Vision of the John Marshall Soil and Water Conservation District is to serve the citizens of Fauquier County as the leader in ensuring proper stewardship of soil, water and related resources.

The Mission of the John Marshall Soil and Water Conservation District is to provide leadership, technical assistance, and education to the citizens of Fauquier County in proper soil stewardship and water quality protection to ensure the wise use of the county’s natural resources.

BOARD MEETINGS	SUPPORT
The District conducts monthly board meetings to deal with conservation issues and landowners' concerns within Fauquier County. The public, as well as cooperating agencies, are invited to attend District meetings and provide input. Unless otherwise noted, meetings are held the second Wednesday at 5:00pm each month at the JMSWCD office on Alexandria Pike in Warrenton.	<p>The Commonwealth of Virginia supports the John Marshall Soil and Water Conservation District through financial and administrative assistance provided by the Department of Conservation and Recreation.</p> <p>The Fauquier County Board of Supervisors supports the John Marshall Soil and Water Conservation District through an annual grant and provides administrative assistance through the Department of Finance and the Department of Human Resources, to administer payroll, benefits, and personnel matters.</p>

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